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On the Duration of Life in the Members of the Several Professions. By WILLIAM A. GUY, M.D., *Cantab.*; *Fellow of the Royal College of Physicians*; *Professor of Forensic Medicine, King's College*; *Physician to King's College Hospital*; *Honorary Secretary to the Statistical Society, &c.*

[Read before the Statistical Section of the British Association for the Advancement of Science, 11th September, 1846.]

THE object of the present communication is to turn to account such facts, gleaned from the Annual Register, as have not already been employed in a former Essay*. The facts in question consist of the ages at death of the members of the several professions, classified as follows,—army, navy, clergy, lawyers, medical men, fine arts, literature, and science, to which are added persons engaged in trade and commerce.

A few words of explanation may be necessary, in respect of these several classes. Under the head “army and navy,” are comprised only officers of those two professions; the “lawyers” consist, with few exceptions, of barristers; the “medical men” of physicians and surgeons, with a few general practitioners, who have attained to eminence in their profession; under the title “fine arts” are included architects, painters, engravers, sculptors, musicians, actors of celebrity, and members of other professions, more nearly allied to the fine arts than to the so-called learned professions; the persons engaged in trade and commerce, consist of merchants and tradesmen who have succeeded in earning a place in an obituary.

The ages at death were taken without selection or exclusion, except of deaths by accident or violence; and, as in the case of all the classes, the obituary extends over the same period of 85 years, (from 1758 to 1843,) and the facts are numerous; it is believed that the averages will prove near approximations to the true durations of life. The subject of the Essay will be further illustrated by facts derived from other sources.

The numbers of facts on which the several averages are based, are as follow:—army, 617; navy, 378; army and navy, 995; clergy, 963; lawyers, 312; medical men, 260; learned professions, 1535; fine arts, &c. 255; English literature and science, 401; foreign literature and science, 274; English and Foreign, 675; trade and commerce, 538; aristocracy, as stated in the former Essay, 1239; gentry, 1787; members of royal houses, (males,) 102.

The following tables correspond in arrangement and order with those of the two former Essays. The first table presents the facts on which the subsequent calculations are founded; the second and third tables give the same facts in quinquennial and decennial periods.

* “On the Duration of Life among the English Gentry, &c.”—*Statistical Journal*, March, 1846, vol. ix., p. 37.

TABLE I.

Age.	Army.	Navy.	Clergy.	Law.	Physic.	Fine Arts.	Literature and Science.		Trade and Commerce.
							English.	Foreign.	
21	5	1	....	....	1	1	2	....	2
22	7	3	....	....	1	0	....	....	3
23	3	1	....	....	1	3	....	....	2
24	5	0	....	....	0	1	....	....	8
25	1	0	2	3	0	1	3	1	2
26	8	1	2	3	1	2	1	....	1
27	5	2	3	2	1	3	4	....	2
28	7	3	4	5	5	2	1	....	3
29	3	1	3	1	0	2	1	1	2
30	4	0	4	4	6	1	4	1	0
31	5	1	5	0	1	2	1	....	4
32	4	1	5	2	2	0	2	2	1
33	2	0	9	2	2	3	....	3	6
34	5	2	6	1	2	1	2	1	3
35	4	1	4	0	2	1	6	2	1
36	1	2	3	2	0	1	....	1	4
37	3	0	4	5	3	0	2	....	1
38	1	3	12	1	1	0	2	2	5
39	2	1	3	2	4	6	1	1	2
40	5	7	10	3	4	3	3	2	6
41	4	0	0	2	1	1	1	4	1
42	3	4	16	2	3	2	6	4	7
43	6	4	7	3	3	0	5	6	4
44	4	5	6	0	1	4	4	....	3
45	5	2	8	6	3	4	3	5	5
46	6	7	4	3	4	3	5	3	4
47	6	1	6	5	1	5	5	....	3
48	8	3	4	3	4	2	5	1	2
49	7	3	8	0	0	3	4	2	1
50	6	5	10	2	2	2	4	4	8
51	4	3	6	5	2	1	3	4	1
52	11	7	8	4	1	4	4	2	5
53	19	4	9	3	2	6	5	4	9
54	7	0	8	2	2	5	5	2	8
55	9	5	9	7	5	1	5	2	4
56	8	4	8	3	4	3	5	7	11
57	11	6	7	1	5	4	2	4	8
58	11	6	13	3	5	2	6	4	5
59	9	5	6	5	1	2	3	2	9
60	15	5	19	6	4	8	10	10	7
61	8	4	12	2	2	3	5	7	11
62	11	5	17	4	3	7	9	6	10
63	16	3	20	4	5	5	10	7	17
64	9	9	13	4	8	7	10	6	14
65	10	11	17	8	5	4	8	7	10
66	10	8	27	4	10	6	8	4	4
67	10	11	17	7	3	3	13	4	11
68	13	7	30	10	10	6	12	8	15
69	12	9	12	5	5	8	10	7	10
70	20	21	21	14	4	14	15	7	19

TABLE I.—*continued.*

[illegible]

TABLE II.

Age.	Army.	Navy.	Clergy.	Law.	Physic.	Fine Arts.	Literature and Science.		Trade and Commerce.
							English.	Foreign.	
21—25	21	5	2	3	3	6	5	1	17
26—30	27	7	16	15	13	10	11	2	18
31—35	20	5	29	5	9	7	11	8	15
36—40	12	13	32	13	12	10	8	6	18
41—45	22	15	37	13	11	11	19	19	20
46—50	33	19	32	13	11	15	23	10	18
51—55	50	19	40	21	12	17	22	14	27
56—60	54	26	53	18	19	19	26	27	40
61—65	54	32	79	22	23	26	42	33	62
66—70	65	56	107	40	32	37	58	30	59
71—75	72	72	155	43	33	28	61	43	72
76—80	78	46	159	41	35	26	46	33	71
81—85	59	32	129	36	30	23	49	30	53
86—90	31	17	60	22	9	16	21	12	27
91—95	16	6	26	5	4	4	8	4	20
96—100 } and upwards }	3	8*	7	2	4	0	1	2	11
Maximum	98	102	108	100	100	94	97	98	112*

* Also 1 at 108.

TABLE III.

Age.	Army.	Navy.	Clergy.	Law.	Physic.	Fine Arts.	Literature and Science.		Trade and Commerce.
							English.	Foreign.	
21—30	48	12	18	18	16	16	16	3	25
31—40	32	18	61	18	21	17	19	14	33
41—50	55	34	69	26	22	26	42	29	38
51—60	104	45	93	39	31	36	48	41	67
61—70	119	88	186	62	55	63	100	63	121
71—80	150	118	314	84	68	54	107	76	143
81—90	90	49	189	58	39	39	70	42	80
91—100 } and upwards }	19	14	33	7	8	4	9	6	31
	617	378	963	312	260	255	411	274	538

TABLE IV.

Age.	Army.	Navy.	Army and Navy.	Clergy.	Law.	Physic.	Learned Professions.	Fine Arts.	Literature and Science.		Trade and Commerce.
									Eng.	For.	
26 and upwards..	65·27	67·63	66·18	68·81	66·20	65·36	67·70	64·42	66·49	62·78	68·11
31 ..	67·07	68·40	67·59	69·49	68·14	67·31	68·86	65·96	67·55	66·72	68·74
41 ..	68·97	70·01	69·38	71·82	70·20	70·23	71·24	68·21	69·15	68·42	71·01
51 ..	71·58	72·62	71·99	74·04	72·78	72·95	73·62	71·15	72·10	71·44	72·32

The preceding table gives the average age of such members of the several professions as had attained, or outlived, the specified ages.

If we limit our comparison to the last line of the table, which is, for obvious reasons, most worthy of confidence, and extend that comparison by admitting the averages derived from the same source, and for the same period of time, published in the two former Essays, we obtain the following results.

England (males)	75·64	Army and Navy	71·99
Gentry	74·00	Peerage and Baronetage	71·69
Learned Professions	73·62	Literature and Science (Foreign)	71·44
Trade and Commerce	72·32	Fine Arts, &c.	71·15
Literature and Science (English)	72·10	Royal Houses (males)	68·54

These averages lend confirmation to the statements recently advanced, to the effect that the duration of life among the higher classes is shorter than that of the mass of the people of England, and of the provident members of the labouring class. Descending in the scale of rank from the aristocracy and gentry, to those next below them in social position, we encounter a series of averages, ranging from 73·62 to 71·15, the former falling short by less than half a year of the duration of life among the English gentry, the latter being less by about the same fraction of a year than the average age attained by the aristocracy.

The difference between the duration of life in the members of the learned professions and those devoted to the fine arts, amounting to 2·47 years, is such a slight difference as might be expected in men having a similar command of the comforts and luxuries of life, and differing but little in their mode of living. Had the difference been more considerable, it would have led us to distrust the character or sufficiency of the facts from which the averages are deduced; as it is, the results may be looked upon as affording a confirmation of both.

I now proceed to examine more minutely the elements which make up the groups comprised in the preceding table.

The *army* and *navy* respectively attained the following averages,—

	Army.	Navy.	Army and Navy.
26 and upwards	65·27	67·63	66·18
31 „ 	67·07	68·40	67·59
41 „ 	68·97	70·01	69·38
51 „ 	71·58	72·62	71·99

From whatever age, therefore, the average is calculated, the navy will be found to have a slight advantage, varying from 2·36 years, if calculated for 26 years and upwards, to 1·04 if calculated for 51 years and upwards. It would, therefore, appear that of the two professions the navy is the more healthy.

The averages for the *learned professions* are shown in the following table:—

	Clergy.	Lawyers.	Physicians, &c.	Learned Professions.
26 and upwards....	68·81	66·20	65·36	67·70
31 „ 	69·49	68·14	67·31	68·86
41 „ 	71·82	70·20	70·23	71·24
51 „ 	74·04	72·78	72·95	73·62

The clergy, it will be seen, attain a higher average age, in whatever way the calculation is made, than the members of the other

learned professions. They have the advantage of more than one year, an advantage not to be wondered at, when it is considered how much larger a proportion of clergymen reside in the country, how much less they are exposed to fatigue and danger of infection than their brethren of the medical profession, and that they do not lead the sedentary life which falls to the lot of the lawyer. When these things are taken into account, the advantage of little more than one year possessed by the clergy will excite some surprise. The still smaller advantage which they claim over the gentry, to which class so large a portion of their profession belong, is still more remarkable, and not undeserving of attention.

The physician would appear, from the last two lines of the table, to possess a slight advantage over the barrister, but it is too small to justify any lengthened inquiry as to its cause. Whether the risks to which the medical man is exposed in the practice of his profession, are counterbalanced by the disadvantages attending a more sedentary pursuit, is a question which may be thrown out for discussion. On a more close examination of the table, it would appear that the lawyer has an advantage in the early period of life, which he is condemned to lose in old age. Is it not at an early period of life that the medical man encounters the greatest risk, at a later period of life that the sedentary habits of the lawyer make themselves felt?

A smaller collection of facts, for which I am indebted to the kindness of Mr. Whishaw, gives for the members of the legal profession a somewhat shorter duration of life. This obituary extends from the years 1833 to the year 1845, and comprises those who have attained to positions of eminence in their profession. The exact number of facts is 216.

	Annual Register. (1758 to 1843).	Mr. Whishaw. (1833 to 1845).
26 and upwards.....	66·20	62·11
31 " 	68·14	64·09
41 " 	70·20	67·35
51 " 	72·78	70·89

Professor Casper, of Berlin, has examined the duration of life among medical men, (chiefly Germans,) and has obtained results much less favourable than those derived from the Annual Register*. It is probable, however, that under the title "médecins" he has comprised a lower grade of the profession than those whose deaths are recorded in the obituaries of the Annual Register. Though anatomists, veterinary surgeons, naturalists, and medical men who occupy themselves solely with literary pursuits are excluded, the tables probably comprise a large number of men answering to the general practitioners of England, among whom there is reason to believe that the duration of life is greatly shortened by exposure and fatigue. The results are embodied in the following table.

	Annual Register.	Casper's Table.
26 and upwards.....	65·36	58·00
31 " 	67·31	59·27
41 " 	70·23	63·82
51 " 	72·95	68·21

* "Annales d'Hygiène," 1834, Tome xi.

The mixed class of literary and scientific persons may be advantageously contrasted with persons devoted solely to literature, whose ages at death I have obtained in 356 instances from Chambers' English Literature. The two orders of facts do not admit of exact comparison, as those gleaned from the Annual Register extend over a period of 85 years, while those obtained from Chambers' English Literature comprise our oldest as well as our most modern authors. The difference, however, is not very considerable, as will be seen in the following table, to which, for the purpose of comparison, is added a column showing the average age of chemists, 41 in number, from Thomson's History of Chemistry.

	Literature and Science.		Literature.	Chemists.
	English.	Foreign.	(Chambers.)	(Thomson.)
26 and upwards....	66·49	62·78	63·05	65·70
31 ,, 	67·55	66·72	63·34	66·67
41 ,, 	69·15	68·42	65·60	66·67
51 ,, 	72·10	71·44	69·14	69·51

M. Benoiston de Chateauneuf, in a paper published in the 25th volume of the *Annales d'Hygiène*, has recorded the ages at death of the members of the three French Academies (the Académie Française, the Académie des Inscriptions, and the Académie des Sciences) from the year 1635 to the year 1793. He has also given the age at death of the members of the French Institute, from its foundation in 1795*. The following table presents the results of these figures, side by side with those already given.

	Annual Register.		French Academies.	French Institute.
	English.	Foreign.		
26 and upwards....	66·49	62·78	68·84	—
31 ,, 	67·55	66·72	69·20	68·51
41 ,, 	69·15	68·42	70·42	69·14
51 ,, 	72·10	71·44	72·47	70·38

The average age of admission into the Académie Française was 46 years 2 months; into the Academy of Inscriptions, 46 years; and into the Academy of Sciences, 41 years 3 months. It is probable, therefore, that the admissions at the earlier ages being few in number, and the deaths proportionately few, the average age of all above 26 and 31 years will be somewhat exaggerated. Considering the different sources from which the facts are derived, a difference of two years between the highest and lowest average age of all dying above 40 and 50 respectively is not considerable, and may be regarded as a confirmation of the value of the several results considered as approximations to the true duration of life of the literary and scientific class.

I am enabled to make a similar comparison between the class designated "Fine Arts," &c., and one constituent of that class—painters. The facts, amounting to 485, and comprising the painters of all schools and of every period, were obtained from a table compiled by Major James Bell†.

* The number of deaths in the case of the Academies is 571, and in that of the Institute 186.

† I have been favoured by Mr. Brent with the ages at death of 876 painters, abstracted from "Pinkerton's Dictionary," edited by Fuseli. The results of this collection of facts differ so widely from those of Major Bell's Tables, that I place them, for the present, in a note, hoping to be able to verify or correct them, as the

	Fine Arts, &c.	Painters.
26 and upwards.....	64·42	63·86
31 „	65·96	64·46
41 „	68·21	67·15
51 „	71·15	70·96

The difference is here very inconsiderable, the greatest being only a year and a half, the least a small fraction of a year.

The subject of this paper admits of being pursued much more into detail, and would doubtless repay any labour that might be bestowed upon it.

It would also be interesting and instructive, to institute a more extensive comparison between the present averages and those obtained by other statisticians at home and abroad; but it has appeared more in accordance with the objects of the Society, to limit the present communication chiefly to facts not to be found in any other publication.

The following table presents a more detailed summary of results than the one already given. The averages are limited to persons dying aged 51 and upwards, and, where not otherwise stated, must be understood to be taken from the Annual Register.

Profession, &c.	Average Age.	Profession, &c.	Average Age.
England (males, Mr. Farr).....	75·64	Army	71·58
Clergy	74·04	Literature and Science (Foreign)....	71·44
Gentry	74·00	Fine Arts, &c.	71·15
Medical Men	72·95	Painters (Major Bell's Table).....	70·96
Lawyers	72·78	Chemists (Thomson)	69·51
Navy.....	72·62	English Literature (Chambers)	69·14
Trade and Commerce	72·32	Members of Royal Houses (males) 68·54	
Literature and Science (English)....	72·10	Kings of England.....	64·12
Aristocracy	71·69		

It is scarcely necessary to remind the reader that of the foregoing averages the only ones which admit of strict comparison as extending over the same period of time are those deduced from facts gleaned from the obituaries of the Annual Register. The average for England is deduced from recent facts, but those for the classes of painters, literary men, and chemists, as well as for the Kings of England, extend over a considerable term of years. Between the most favourable average, namely, that for the clergy, and the least favourable, namely, that for members of royal houses, both of which are deduced from the facts collected from the obituaries of the Annual Register, there is a difference of five and a half years.

case may be, by a future reference to the Dictionary. The average ages at death are as follows:—26 and upwards, 50·34; 31 and upwards, 50·79; 41 and upwards, 52·16; 51 and upwards, 53·25.

I am also indebted to Mr. Brent for the ages at death of a very different class of men from any comprised in the tables, namely, Pugilists, 53 in number. The results, though somewhat out of place here, may be briefly stated. They are as follow:—26 and upwards, 47·00; 31 and upwards, 50·78; 41 and upwards, 57·62; 51 and upwards, 65·53.